

COMMENTARY

Early Experience of Sexual Intercourse - A Risk Factor for Cervical Cancer Requiring Specific Intervention for Teenagers

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Abstract

There is consensus that the main risk factor for cervical cancer development is persistent infection with high-risk group human papilloma viruses (HPVs), together with smoking, and reproductive history. Since sexual behaviour determines exposure to HPVs and the adolescent period may be particularly important in this regard it is of interest to consider behavioural determinants of teenagers. In one survey conducted in Khon Kaen, Thailand, some 62% percent of male and 19.3 % of female respondents aged 13-15 years reported having experienced sexual desire, and 19.1% of male and 4.7 % of female respondents admitted to sexual intercourse. The possibility that this might impact on HPV infection rates, with added risk due to the physical trauma associated with pregnancy and illegal abortions, indicates that more attention needs to education of early teens, not only for avoidance of HIV and AIDS, but also for prevention of cervical cancer.

Key Words: Early adolescence - sexual intercourse - HPV infection - cervical cancer risk factors

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Introduction

The key period of sexual exploration and development occurs during adolescence. Globally and in Thailand, early initiation of sexual activity has been found to associated with a number of problems. Evidence from around the world suggests that young, unmarried, adolescents are initiating intercourse at a younger age, having multiple sexual partners, having unprotected first intercourse and being more likely to report risky sexual behavior than do married adolescents and people in older age groups (Adamu et al., 2003; Akwara et al., 2003; Felton et al., 2002). Such behavior increases the risk of HIV/AIDs, other sexually transmitted disease (STD) and unintended pregnancy among teenagers. It may also be associated with very early HPV infection and an elevated risk of cervical cancer development. As everywhere in the world, HPV is well known to be important for cervical cancer in Thailand (Chichareon et al., 1998).

Results of a Khon Kaen Study

Data from the Khon Kaen study site in the project "Prevention and Reduction of HIV Infection among Young People in School" are thus of major interest. The subjects for this study were adolescents studying in grades seven to nine of high schools, aged 13-15, and the results (summarized in Table 1) reveal that sexual experience is

not uncommon, even at this young age, in line with earlier findings in Thailand (O-Prasertsawat and Petchum, 2004). In Africa age at first intercourse has been reported to be under 12 years in 18%, 13-15 years in 38%, and 16 years or above in 44% and the earlier the age at first intercourse, the more likely it was that the adolescent would have multiple sexual partners and several STDs (Duncan et al., 1994). In the Transkei, among sexually active teens, mean ages at menarche, first date, and first coitus were 13.9, 14.5, and 14.9 years, respectively (Buga et al., 1996). Thus, with earlier menarche because of childhood obesity it can be expected

Table 1. Data for Sexual Experience

Parameter	Males	Females
Current boy/girlfriend		
Yes	91 (35.5)	109 (30.1)
Ever experienced sexual desire		
Yes	159 (62.1)	70 (19.3)
Source of first sexual desire*		
Magazine	91 (10.2)	37 (4.2)
VCD, CD	116 (13.1)	50 (5.6)
Sexy dressing	88 (9.9)	27 (3.1)
Internet	79 (8.9)	34 (3.8)
Cartoon	56 (6.7)	42 (4.3)
Ever had sexual intercourse		
Yes	49 (19.1)	17 (4.7)

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that rates for early initiation of sexual experience will rise in Asia.

Interacting Factors

Age at first intercourse and in some cases lifetime number of sexual partners have been found to be very important factors for invasive cervix cancer in young women in Thailand (Punyaratabandhu et al., 1982; Settheetham-Ishida et al., 2006), Korea (Yoo et al. 1997), Kenya (Williams et al., 1994), Costa Rica (Stone et al., 1995), Britain (Cuzick et al., 1996), Australia (Brock et al., 1989), Spain (Munoz et al., 1995) and Portugal (Matos et al., 2005). Early age at first coitus in women with a low rate of sexual promiscuity was also reported to be a risk factor for cervical carcinogenesis among rural Indian women (Biswas et al 1997).

In one study CIS and invasive cervical cancer were associated with age at first episode with genital warts (a proxy measure for infection with human papillomavirus (HPV) (Kjaer, 1998) and clearly the earlier the initiation of sexual activity, the earlier this can occur. It is possible that the cervical transformation zone is particularly vulnerable to infection between menarche and the age of sixteen. During this phase there are a large number of undifferentiated cells at the periphery of the metaplasia, practically at the surface of the cervix. It seems that this area is particularly susceptible to HPV infection. There are also indications that there is no secondary immune response to HPV at the time of early first intercourse, making the immune response to HPV less efficient (Reich, 2005). Age of first sexual intercourse should thus be considered an important and identifiable risk factor for subsequent HPV infection (Kahn et al., 2002). Furthermore, baseline predictors of coinfection with multiple HPV strains included greater number of recent sexual partners and younger age at first sexual intercourse (Rousseau et al., 2003).

In addition to the detrimental effects of early HPV infection, the risks associated with pregnancy and abortion must be taken into account. Since abortion is illegal in Thailand there is no recourse to clinically appropriate

facilities so that trauma due to self administered measures to terminate an unwanted pregnancy is very conceivable. There is abundant evidence that the number of pregnancies positively correlates with cervical cancer risk, for example from a Colombia, Costa Rica, Mexico, and Panama study conducted during 1986-1987, the association persisting after adjustment for sexual and socioeconomic variables (Brinton et al., 1989). In Thailand, the number of pregnancies and age at having first child were associated with the risk of cervical cancer (Sriamporn et al., 2004). High parity and poor genital hygiene conditions were found to be the main co-factors with HPV for cervical cancer in Mali (Bayo et al., 2002). Early exposure of the immature cervical epithelium to STDs and the trauma of repeated childbirth, were similarly highlighted by a study in Ethiopia (Duncan et al., 1993). Other evidence for an importance of trauma is provided by the link with years on IUDs (Kjaer et al., 1996) and regular douching with preparations other than water or vinegar (Brinton et al., 1990). Frequent douching alters the vaginal chemical environment, making the cervix more susceptible to pathologic change (Gardner et al., 1991).

Conclusions

It is clear that young adolescents must be included as an important target population for improved education efforts to prevent STDs and unplanned pregnancies. Present sources of information on avoiding STDs and birth control are listed in Table 2 with data from the Khon Kaen study site. Family, friends and media influence the knowledge, desires and, most likely, the attitudes of young adolescents. Particular attention should be paid to the internet, since over half of the adolescents in one study in Thailand used this for pornographic viewing (O-Prasertsawat and Petchum, 2004). The feasibility of using the identified information sources to effectively promote appropriate, low-risk, sexual behaviors should be explored further using a qualitative approach, with a focus on the necessity for gender-specific interventions. The finding that homo- or bisexual adolescents in northern Thailand are at greater and different health risks than are their heterosexual counterparts (van Griensven et al., 2004) also deserves stress in this context.

In conclusion, more attention needs to be paid to education of early teens, not only for avoidance of HIV and AIDS, but also for prevention of cervical cancer. This is underlined by the relatively high proportion of cases in Thailand found in young females (Moore and Tsuda, 2003).

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Table 2. Sources of Knowledge

Sources	STDs prevention		Birth control	
Formal sources				
Teacher	385*	83.3#	121	86.4
Health personal	257	55.6	87	62.1
Informal sources				
Television	281	60.8	98	70.0
Parents	235	50.9	87	62.1
Friend	164	35.5	71	50.7
Magazine	155	33.5	65	46.4
Internet	132	28.6	49	35.0
Radio	129	27.9	46	32.9
Senior students	109	23.6	41	29.3
VCD, CD	92	19.9	28	20.0
Leaflet	41	8.9	22	15.7

* Number of students, # Percentage of the total

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